



# ENGINEERING DATA

## 1300, A1300

### Fixed Pattern - Horizontal Throw 12x12

Neck Size (in.)	Neck Velocity	200	400	600	700	800	900	1000	1100	1200
	Airflow Rate (CFM)	39	59	98	118	137	157	177	196	216
6	Static Pressure	0.006	0.015	0.040	0.058	0.079	0.103	0.131	0.161	0.195
	Total Pressure	0.009	0.020	0.056	0.081	0.110	0.143	0.181	0.224	0.271
	Horizontal Throw	1-2-4	2-3-7	4-6-9	4-7-10	5-8-11	6-8-12	7-9-13	7-9-13	8-10-14
	NC	-	-	14	21	26	31	35	38	42
Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	70	105	175	209	244	279	314	349	384
8	Static Pressure	0.010	0.023	0.065	0.094	0.127	0.166	0.210	0.260	0.314
	Total Pressure	0.013	0.029	0.081	0.116	0.158	0.206	0.261	0.322	0.390
	Horizontal Throw	1-2-6	2-4-9	5-7-12	6-9-13	7-10-15	8-11-16	9-12-17	9-12-17	10-13-18
	NC	-	-	-	17	23	28	33	37	41

Notes: See Page CD76



# ENGINEERING DATA

## 1300, A1300

### Fixed Pattern - Horizontal Throw 24x24

Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	39	59	98	118	137	157	177	196	216
6	Static Pressure	0.002	0.004	0.010	0.015	0.020	0.026	0.033	0.041	0.049
	Total Pressure	0.004	0.009	0.026	0.037	0.050	0.066	0.083	0.103	0.124
	Horizontal Throw	1-1-4	1-3-6	3-5-8	4-6-9	4-6-10	5-7-10	6-8-11	6-8-11	7-8-12
	NC	-	-	-	-	-	12	16	19	22
Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	70	105	175	209	244	279	314	349	384
8	Static Pressure	0.003	0.007	0.020	0.029	0.039	0.051	0.065	0.080	0.097
	Total Pressure	0.006	0.013	0.036	0.051	0.070	0.091	0.115	0.142	0.172
	Horizontal Throw	1-2-5	2-4-7	4-6-11	5-7-12	6-9-13	7-10-14	7-10-14	8-11-15	9-11-16
	NC	-	-	-	11	16	20	24	27	30
Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	109	164	273	327	382	436	491	545	600
10	Static Pressure	0.005	0.012	0.033	0.047	0.064	0.084	0.106	0.131	0.158
	Total Pressure	0.008	0.017	0.048	0.070	0.095	0.124	0.156	0.193	0.234
	Horizontal Throw	1-2-6	2-4-9	5-8-14	6-9-15	7-11-16	8-12-17	9-13-18	10-14-19	11-14-20
	NC	-	-	12	17	22	26	30	33	36
Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	157	236	393	471	550	628	707	785	864
12	Static Pressure	0.008	0.017	0.048	0.069	0.095	0.123	0.156	0.193	0.233
	Total Pressure	0.010	0.023	0.064	0.092	0.125	0.163	0.207	0.255	0.309
	Horizontal Throw	1-2-7	2-5-11	6-9-16	7-11-18	9-13-19	10-14-20	11-15-22	12-16-23	14-17-24
	NC	-	-	17	22	27	31	34	38	41
Neck Size (in.)	Neck Velocity	200	300	400	500	600	700	800	900	1000
	Airflow Rate (CFM)	214	321	428	535	641	748	855	962	1069
14	Static Pressure	0.011	0.024	0.043	0.067	0.096	0.130	0.170	0.216	0.266
	Total Pressure	0.013	0.030	0.053	0.082	0.118	0.161	0.210	0.266	0.329
	Horizontal Throw	1-3-9	3-6-13	5-9-17	7-11-19	9-13-21	10-15-22	12-17-24	13-18-25	14-19-27
	NC	-	-	14	21	26	31	35	39	42
Neck Size (in.)	Neck Velocity	200	300	400	500	600	700	800	900	1000
	Airflow Rate (CFM)	245	368	491	614	736	859	982	1104	1227
15	Static Pressure	0.012	0.028	0.049	0.077	0.111	0.151	0.197	0.249	0.307
	Total Pressure	0.015	0.033	0.059	0.092	0.133	0.181	0.237	0.299	0.370
	Horizontal Throw	1-3-9	3-7-14	5-9-18	8-12-20	9-14-22	11-16-24	12-18-26	14-19-27	15-20-29
	NC	-	-	16	22	28	33	37	40	44

Notes: See Page CD76



# ENGINEERING DATA

## 1300A, A1300A Series

### Adjustable Pattern - Horizontal Throw 24x24

Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	39	59	98	118	137	157	177	196	216
6	Static Pressure	0.004	0.008	0.023	0.034	0.046	0.060	0.076	0.093	0.113
	Total Pressure	0.006	0.014	0.039	0.056	0.076	0.100	0.126	0.156	0.188
	Horizontal Throw	0-1-2	1-1-4	2-4-7	2-4-9	3-5-10	4-6-10	4-7-11	5-7-11	5-8-12
	NC	-	-	-	15	20	25	30	34	37
Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	70	105	175	209	244	279	314	349	384
8	Static Pressure	0.004	0.008	0.023	0.034	0.046	0.060	0.076	0.093	0.113
	Total Pressure	0.006	0.014	0.039	0.056	0.076	0.100	0.126	0.156	0.188
	Horizontal Throw	1-1-4	1-3-7	3-6-11	4-7-12	5-8-13	6-9-14	7-10-14	7-11-15	8-11-16
	NC	-	-	12	19	25	30	35	39	42
Neck Size (in.)	Neck Velocity	300	400	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	164	218	273	327	382	436	491	545	600
10	Static Pressure	0.008	0.015	0.023	0.034	0.046	0.060	0.076	0.093	0.113
	Total Pressure	0.014	0.025	0.039	0.056	0.076	0.100	0.126	0.156	0.188
	Horizontal Throw	2-4-9	3-6-12	5-8-14	6-9-15	7-11-16	8-12-17	9-13-18	10-14-19	11-14-20
	NC	-	-	16	23	29	34	38	42	46
Neck Size (in.)	Neck Velocity	200	300	400	500	600	700	800	900	1000
	Airflow Rate (CFM)	157	236	314	393	471	550	628	707	785
12	Static Pressure	0.004	0.008	0.015	0.023	0.034	0.046	0.060	0.076	0.093
	Total Pressure	0.006	0.014	0.025	0.039	0.056	0.076	0.100	0.126	0.156
	Horizontal Throw	1-3-8	3-6-12	5-8-14	6-10-16	8-12-18	9-13-19	10-14-20	12-15-22	13-16-23
	NC	-	-	11	19	26	32	37	41	45
Neck Size (in.)	Neck Velocity	200	300	400	500	600	700	800	900	1000
	Airflow Rate (CFM)	214	321	428	535	641	748	855	962	1069
14	Static Pressure	0.004	0.008	0.015	0.023	0.034	0.046	0.060	0.076	0.093
	Total Pressure	0.006	0.014	0.025	0.039	0.056	0.076	0.100	0.126	0.156
	Horizontal Throw	2-3-9	3-7-14	6-9-17	8-12-19	9-14-21	11-16-22	12-17-24	14-18-25	15-19-27
	NC	-	-	14	21	26	31	35	39	42
Neck Size (in.)	Neck Velocity	200	300	400	500	600	700	800	900	1000
	Airflow Rate (CFM)	245	368	491	614	736	859	982	1104	1227
15	Static Pressure	0.004	0.008	0.015	0.023	0.034	0.046	0.060	0.076	0.093
	Total Pressure	0.006	0.014	0.025	0.039	0.056	0.076	0.100	0.126	0.156
	Horizontal Throw	2-4-10	4-8-15	7-10-18	8-13-20	10-15-22	12-17-24	14-18-26	15-19-27	17-20-29
	NC	-	-	15	23	30	36	41	45	49

Notes: See Page CD76



# ENGINEERING DATA

## 1300A, A1300A

### Adjustable Pattern - Vertical Throw 24x24

Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	39	59	98	118	137	157	177	196	216
6	Static Pressure	0.005	0.011	0.032	0.046	0.062	0.081	0.103	0.127	0.154
	Total Pressure	0.008	0.017	0.047	0.068	0.093	0.121	0.154	0.190	0.229
	Vertical Throw (+40°F ΔT)	0-0-1	0-0-1	0-1-1	1-1-1	1-1-1	1-1-1	1-1-1	1-1-2	1-1-2
	Vertical Throw (+20°F ΔT)	0-0-1	0-1-1	1-1-2	1-1-2	1-1-2	1-1-2	1-1-2	1-2-2	1-2-2
	Vertical Throw (0°F ΔT)	0-0-1	0-1-1	1-1-2	1-1-2	1-1-2	1-2-2	1-2-2	1-2-3	2-2-3
	Vertical Throw (-20°F ΔT)	0-1-1	1-1-2	1-1-2	1-2-2	1-2-3	1-2-3	2-2-3	2-2-3	2-2-3
	NC	-	-	12	18	23	28	32	35	38
Neck Size (in.)	Neck Velocity	200	300	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	70	105	175	209	244	279	314	349	384
8	Static Pressure	0.007	0.015	0.042	0.061	0.083	0.109	0.137	0.170	0.205
	Total Pressure	0.009	0.021	0.058	0.084	0.114	0.148	0.188	0.232	0.281
	Vertical Throw (+40°F ΔT)	0-0-1	0-1-1	1-1-1	1-1-2	1-1-2	1-1-2	1-1-2	1-1-2	1-2-2
	Vertical Throw (+20°F ΔT)	0-0-1	0-1-1	1-1-2	1-1-2	1-2-2	1-2-3	1-2-3	2-2-3	2-2-3
	Vertical Throw (0°F ΔT)	0-1-1	1-1-2	1-1-2	1-2-3	1-2-3	2-2-3	2-2-3	2-2-3	2-3-4
	Vertical Throw (-20°F ΔT)	0-1-1	1-1-2	1-2-3	1-2-3	2-2-4	2-3-4	2-3-4	2-3-4	3-3-4
	NC	-	-	17	23	28	33	36	40	43
Neck Size (in.)	Neck Velocity	300	400	500	600	700	800	900	1000	1100
	Airflow Rate (CFM)	164	218	273	327	382	436	491	545	600
10	Static Pressure	0.009	0.020	0.036	0.056	0.081	0.110	0.143	0.182	0.224
	Total Pressure	0.011	0.026	0.046	0.072	0.103	0.140	0.183	0.232	0.287
	Vertical Throw (+40°F ΔT)	1-2-4	2-3-6	3-4-8	3-5-9	4-6-10	5-7-11	5-8-12	6-9-12	7-9-13
	Vertical Throw (+20°F ΔT)	1-2-5	2-4-8	3-5-10	4-6-13	5-8-14	6-9-15	7-10-16	8-12-17	9-13-18
	Vertical Throw (0°F ΔT)	1-2-6	2-5-9	4-6-12	5-8-15	6-9-17	7-11-18	8-12-20	9-14-21	10-15-22
	Vertical Throw (-20°F ΔT)	1-2-8	2-5-11-	4-8-15	6-9-19	8-11-20	9-13-22	10-15-24	11-17-25	13-19-26
	NC	-	-	14	21	27	32	36	40	44
Neck Size (in.)	Neck Velocity	100	200	300	400	500	600	700	800	900
	Airflow Rate (CFM)	79	157	236	314	393	471	550	628	707
12	Static Pressure	0.003	0.012	0.026	0.047	0.073	0.105	0.143	0.186	0.236
	Total Pressure	0.004	0.014	0.032	0.057	0.088	0.127	0.173	0.226	0.286
	Vertical Throw (+40°F ΔT)	0-0-2	1-2-5	2-4-7	3-5-10	4-6-11	5-7-12	6-9-13	7-10-14	7-10-15
	Vertical Throw (+20°F ΔT)	0-1-2	1-2-6	2-5-9	4-6-12	5-8-15	6-9-17	7-11-18	8-12-19	9-14-21
	Vertical Throw (0°F ΔT)	0-1-3	1-3-7	3-6-11	5-7-15	6-9-19	7-11-20	9-13-22	10-15-24	11-17-25
	Vertical Throw (-20°F ΔT)	0-1-3	1-3-9	3-6-14	5-9-18	8-11-22	9-14-25	11-16-27	12-18-28	14-20-30
	NC	-	-	-	17	24	30	35	39	43

Notes: See Page CD76



# ENGINEERING DATA

## 1300A, A1300A

### Adjustable Pattern - Vertical 24x24

Neck Size (in.)	Neck Velocity	100	200	300	400	500	600	700	800	900
	Airflow Rate (CFM)	107	214	321	428	535	641	748	855	962
14	Static Pressure	0.004	0.015	0.033	0.059	0.092	0.133	0.181	0.237	0.299
	Total Pressure	0.004	0.017	0.039	0.069	0.108	0.156	0.212	0.276	0.350
	Vertical Throw (+40°F ΔT)	0-1-2	1-2-6	2-4-9	4-6-11	5-7-13	6-9-14	7-10-15	8-11-16	9-12-17
	Vertical Throw (+20°F ΔT)	0-1-3	1-3-7	3-5-11	5-7-15	6-9-18	7-11-20	8-13-21	10-15-23	11-16-24
	Vertical Throw (0°F ΔT)	0-1-3	1-3-9	3-6-13	6-9-17	7-11-22	9-13-24	10-15-26	12-17-27	13-19-29
	Vertical Throw (-20°F ΔT)	0-1-3	1-3-11	3-7-16	6-11-21	9-13-26	11-16-29	12-19-31	14-21-33	16-24-35
	NC	-	-	-	19	27	33	38	42	46
Neck Size (in.)	Neck Velocity	100	200	300	400	500	600	700	800	900
	Airflow Rate (CFM)	123	245	368	491	614	736	859	982	1104
15	Static Pressure	0.004	0.017	0.037	0.066	0.103	0.149	0.203	0.265	0.335
	Total Pressure	0.005	0.019	0.043	0.076	0.119	0.171	0.233	0.305	0.385
	Vertical Throw (+40°F ΔT)	0-1-2	1-2-6	2-5-9	4-6-12	5-8-14	6-9-15	7-11-16	8-12-17	9-13-18
	Vertical Throw (+20°F ΔT)	0-1-3	1-3-8	3-6-12	5-8-16	6-10-19	8-12-21	9-14-23	10-16-24	12-18-26
	Vertical Throw (0°F ΔT)	0-1-4	2-4-9	4-7-14	6-9-19	8-12-23	9-14-25	11-16-27	12-19-29	14-21-31
	Vertical Throw (-20°F ΔT)	0-1-4	2-4-11	4-8-17	6-11-23	9-14-28	11-17-31	13-20-33	15-23-35	17-26-38
	NC	-	-	11	21	28	34	39	43	47

#### Notes:

1. Tests conducted in accordance with ANSI/ASHRAE 70-1991 at isothermal conditions.
2. Throw values are given for isothermal conditions.
3. Units: Neck Velocity = fpm; Static Pressure = in. wc.; Total Pressure = in. wc.
4. Throw = feet at 150 fpm, 100 fpm and 50 fpm terminal velocities.
5. NC values are based on octave bands 2-7 sound power levels with a room absorption of 10 dB (Re:  $10^{-12}$  watts).
6. Dash (-) in space denotes an NC value of less than 10.